



Environmental Information Exchange Network

Science Forum
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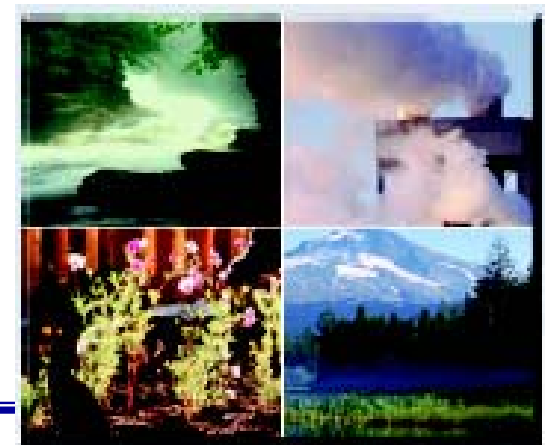
Environmental Council of the States

State Director

Network Steering Board

State/EPA Information Trends

- High demand for access to environmental information among partners
- Current stove-pipe approaches to information exchanges are inefficient and burdensome
- States modernizing information systems and migrating away from use of EPA national systems
- Use of integrated information technologies and approaches is on the rise



State/EPA Shared Vision

The States and EPA are committed to a partnership to build locally and nationally accessible, cohesive and coherent environmental information systems that will ensure that both the public and regulators have access to the information needed to document environmental performance, understand environmental conditions, and make sound decisions that ensure environmental protection.

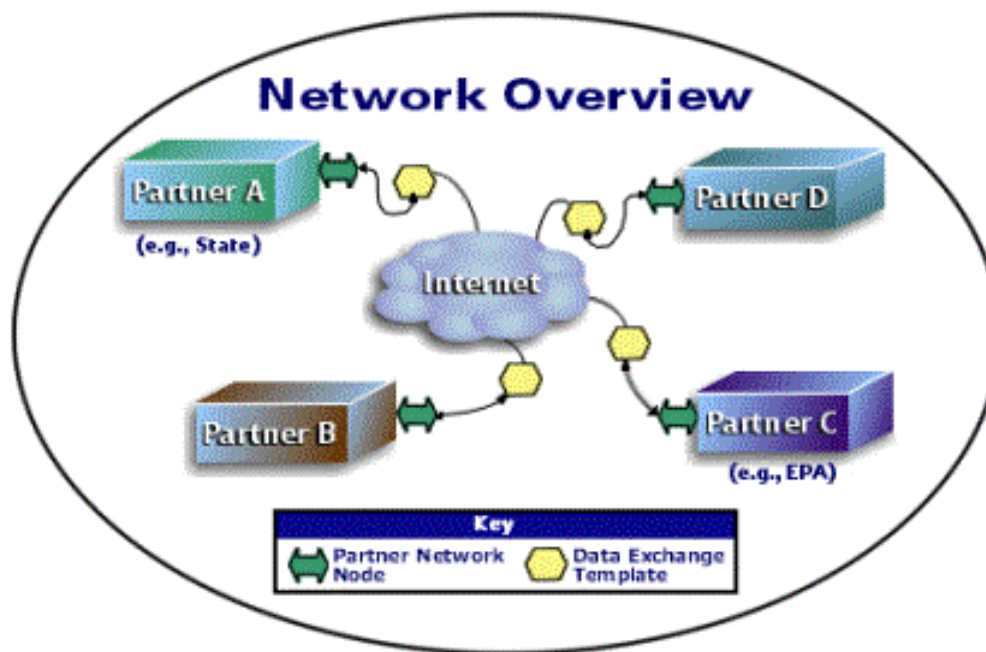


IMWG Develops Exchange Network

The IMWG focused on the issue of “how” data is exchanged between partners (states, EPA, local, industry, other agencies)

- June 2000 – IMWG prepared “*Shared Expectations of the State/EPA Information Management Workgroup for a National Environmental Information Exchange Network (the Network)*”
- July 2000 – IMWG chartered a Network Blueprint Team to prepare the conceptual design for the Network
- October 2000 – IMWG Blueprint Team Initial Report describes the Exchange Network Concepts
- February 2001 - IMWG Blueprint Team Update and commissioning of an Interim Network Steering Group to develop Implementation Plan
- 2002 Exchange Network Implementation plan finalized
- 2002 Network Steering Board (NSB) chartered to implement the Exchange Network
- Fall 2003 – First data flow from State to EPA using the Network (Beaches)

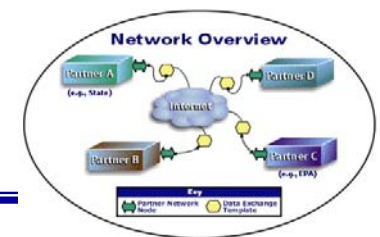
What is the Exchange Network?



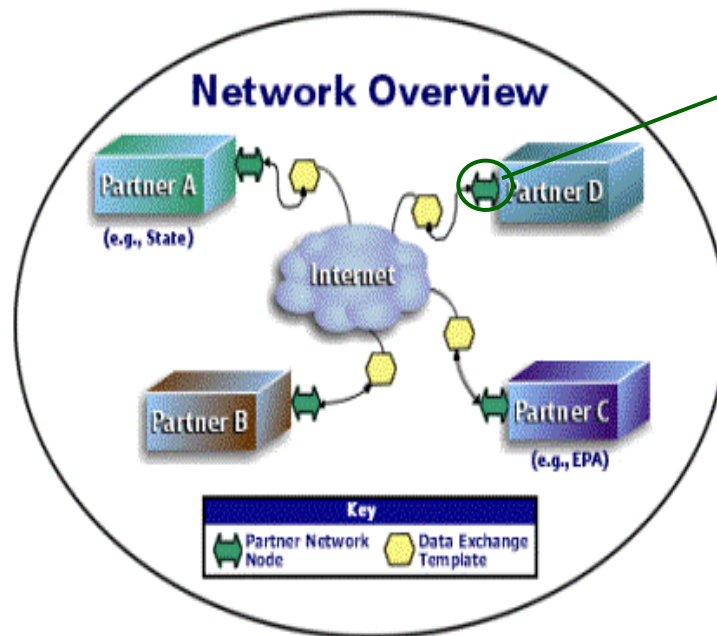
An Internet and standards-based method for exchanging environmental information between partners.

Exchange Network Foundations

- Data standards are incorporated
- Partners agree on exchange data type, frequency, and method
 - Trading Partner Agreements
 - Registered XML schema
 - Partners exchange data over a secure network via each partner's data transfer point, or "Node"



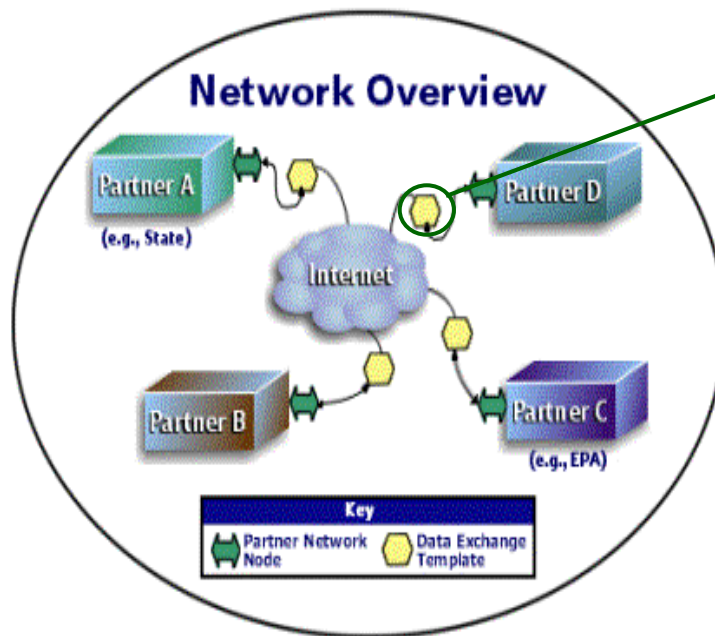
Data Transfer Nodes (Web Services)



Nodes

- Hardware and software used to exchange information on the Network
- Use the Internet, a set of protocols, and appropriate security to respond to authorized requests for information
- Send the requested information in a standard format, XML
- Each partner has only one Node

Data Exchange Templates/ XML Schema



● Data Exchange Templates

- Describe format of data being exchanged
- Consist of XML schema
- Draw upon data standards
- Potential to reuse XML schema modules

Schema are developed for each exchange type (e.g., Discharge Monitoring Report data)

Trading Partner Agreements (TPAs)

- TPAs are made between exchange partners (e.g., State and EPA)
- Identify data exchange frequency
- Identify exact data types/fields exchanged

TRADING PARTNER AGREEMENT

Between the Nebraska Department of Environmental Quality hereinafter referred to as NDEQ and the U.S. Environmental Protection Agency Region VII acting as a representative for the U.S. Environmental Protection Agency and hereinafter referred to as EPA for their participation in sharing data as part of the Facility Identification Integration Activities. The use of the term Agency will refer to both partners.

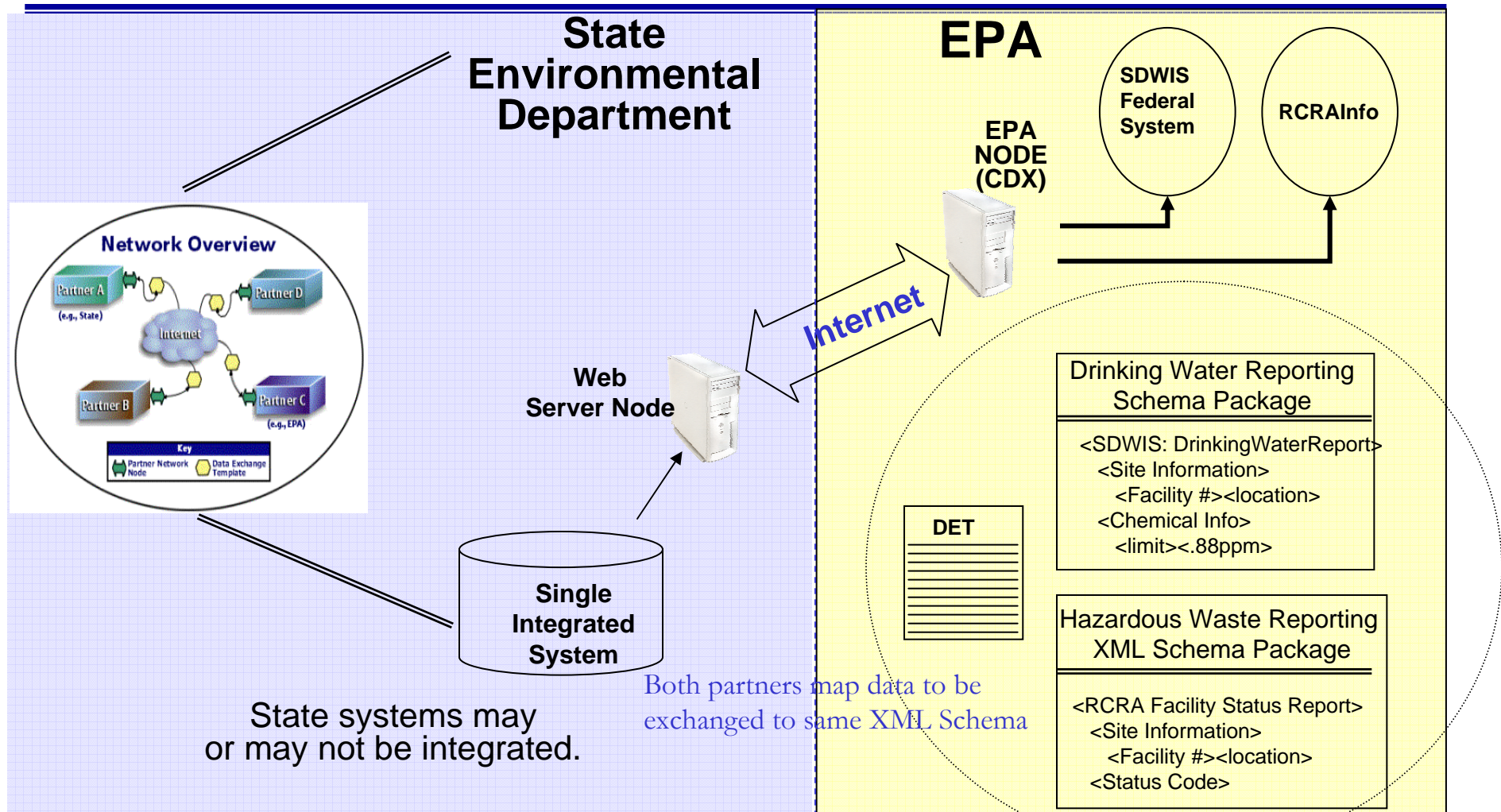
I. PURPOSE

The purpose of this Trading Partner Agreement (TPA) is to identify the activities that NDEQ and EPA will undertake as partners of the Facility Identification Integration Activities. As partners, each will work cooperatively to implement an exchange of facility identification data pertaining to Nebraska sites/facilities for incorporation into the Nebraska Integrated Information System(IIS) and the EPA Facility Registry System(FRS). Each partner will provide internet access to the data, making it available for use by each partner, businesses, interest groups, and the public in general.

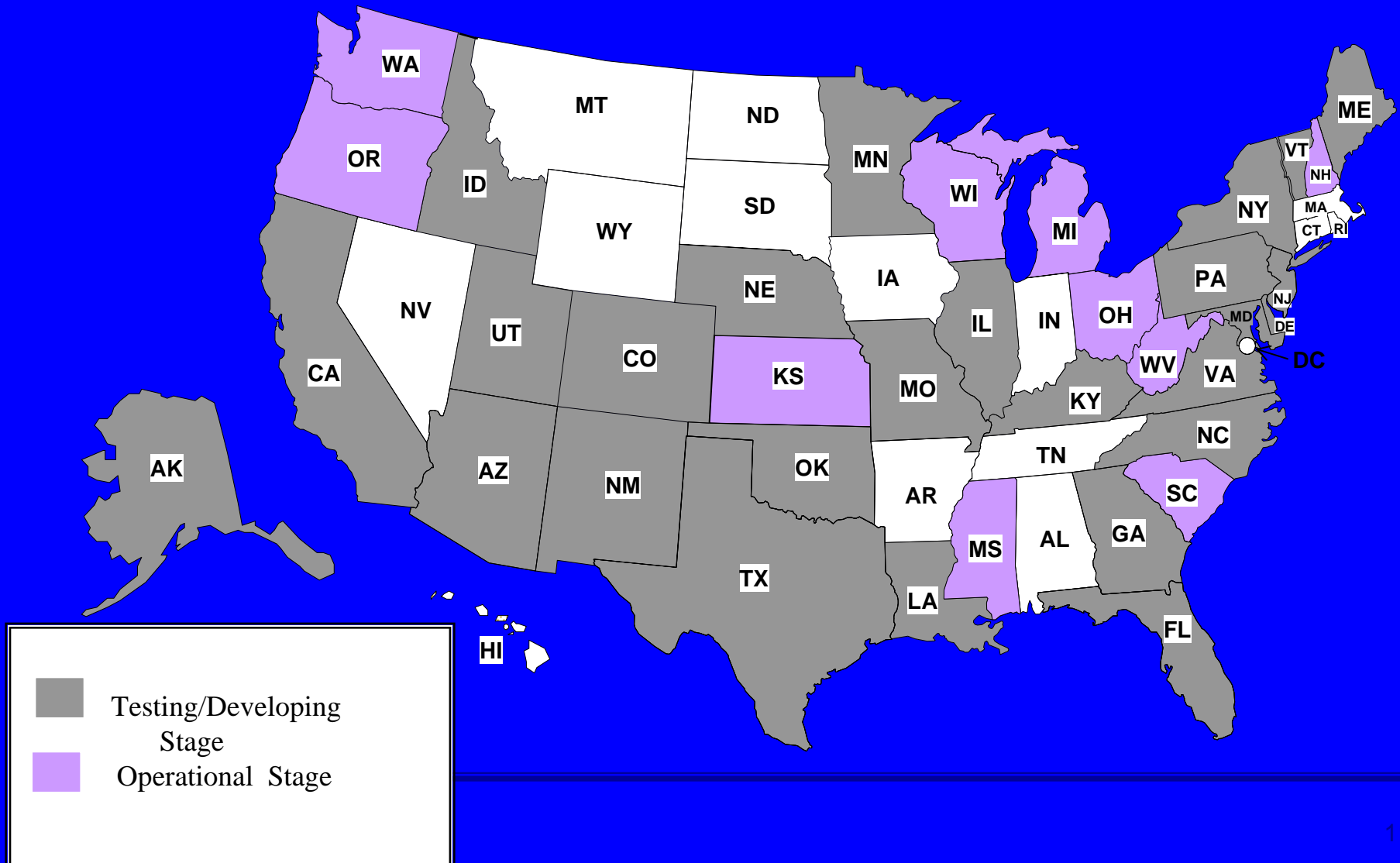
II. BACKGROUND

The partners represent Federal and State Government whose responsibilities in general are for the protection of the environment. As part of their responsibilities, the partners collect and maintain data to support their agency's environmental program interest activities. The consistent identification of facilities within each agency and between agencies is key to the proper use of other data collected by agency environmental programs. It ensures that NDEQ and EPA recognize the same universe of regulated facilities in Nebraska and how these facilities relate to environmental program interests, and their associated data.

How the pieces fit together



Breadth of Participation - States Are Implementing the Network Design



Exchange Network Projects.....

eDMR Challenge Grant - Using the EN to develop electronic Discharge Monitoring Reports with States and EPA

Eliminating data entry and double data entry....into PCS quicker

Pacific Northwest Surface Water Quality Exchange

Challenge Grant - Exchanging surface water monitoring data between states.

Allows focus on multi-state boundary watersheds. Bringing in community data for the first time!

Drinking Water Laboratory Challenge Grant –Exchanging drinking water laboratory results between Laboratories and states using the EN.

Drinking Water Laboratory results directly into state systems ..timely and better quality data.

What is the end result?

- Using the Exchange Network.....
 - Much better quality data being exchange
 - ◆ Data Standards embedded in XML Schema
 - ◆ Closely working with State/EPA Data Standards Council for new standard adoptions to incorporate
 - ◆ Machine to machine – no human data entry mistakes
 - More data can be exchanged among new partners
 - ◆ Infrastructure can be applied to new data exchange types
 - ◆ State to state exchanges already occurring
 - More timely data
 - ◆ Data can be published and exchanged as soon as partners agree. Machines do the work!

What did we fix.....

- No longer dependent upon making sure systems can talk – web services are interoperable
- Reduce and eliminate cost of double data entry activities that compromise data quality
- Provided an infrastructure and mechanism to support new data flows between existing and new partners!

Contact



www.exchangenetwork.net